REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-56 are pending, of which claims 1, 13, 23, 25, 27, 29, 36, 38, 44, 45, 49, and 52 have been amended, as indicated above.

As a preliminary matter, Applicant submitted an Information Disclosure Statement (IDS) on November 30, 2004, and requests consideration and entry of the materials disclosed therein into the official record of the subject application.

Objections to Claims 23 and 24

The Office advises that claim 24 will be objected to under 37 CFR 1.75 as being a substantial duplicate of claim 23 (*Office Action* p.2). Claim 23 is amended for reasons unrelated to this objection which renders the objection moot, and Applicant respectfully requests that the objection be withdrawn.

35 U.S.C. §102 Claim Rejections

Claims 1, 3-21, 36-37, 41-45, 47-48, and 50-56 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,890,017 to Tulkoff et al. (*Office Action* p.2). Applicant respectfully traverses the rejection. Additionally, Applicant notes that paragraph 3 of the Official Action refers to the Gulick reference, while paragraphs 4-39 of the Official Action refer to Tulkoff. It appears that the Office intended to apply Tulkoff to the above rejected claims, and Applicant responds herein accordingly.

Claim 1 recites "dynamically defining a plurality of logical buses in response to a need associated with receiving the streams of audio wave data, the logical buses each corresponding to an audio wave data consumer". The amendments to claim 1 are supported by at least page 14, lines 1-10 of Applicant's Specification.

Although Fig. 1 of Tulkoff and the related description may disclose some type of communications channel between clients (10) and an audio mixer (12), Tulkoff does not support a §102 rejection of the above feature because Tulkoff does not disclose dynamically defining logical buses based on needs associated with receiving the streams of audio wave data. Claim 1 also recites dynamically deallocating a logical bus when no longer needed to route a stream of audio wave data, a feature also supported by the same section of Applicant's specification as cited above. Tulkoff also does not disclose this feature.

Claim 1 also recites "assigning at least one of the multiple streams of audio wave data to a plurality of the logical buses". These amendments to claim 1 are supported by at least Applicant's Fig. 3 and the related discussion in the specification on page 12, line 23 through page 13, line 14, which describes the relationship between, e.g., the channel set 302(1) and the two logical buses 306(1) and 306(2). The audio data "fans-out" from the channel set 302(1) and is routed to the two different logical buses 306(1) and 306(2). Fig. 3 also illustrates a similar relationship between channel set 302(3) and logical buses 306(1), 306(2), and 306(3).

Tulkoff does not disclose or fairly teach this type of audio-data-routing relationship between elements. More particularly, Tulkoff's various audio

processes (10) appear to have a "fan-in" relationship with the audio mixer (12) and ultimately with the audio device (14) (*see* Fig. 1, for example). As such, Tulkoff does not show assigning at least one of the multiple streams of audio wave data to a plurality of the logical buses, as recited in claim 1.

Accordingly, claim 1 along with dependent claims 3-12 are allowable over Tulkoff for at least the reasons described above and Applicant respectfully requests that the §102 rejection be withdrawn.

Claim 13 recites "a software component that dynamically defines logical buses in response to a need associated with receiving the streams of audio wave data and that deallocates at least one of the logical buses when no longer needed, the logical buses corresponding respectively to the plurality of audio wave data consumers".

As described above in the response to the rejection of claim 1, Tulkoff does not show or disclose that logical buses are dynamically defined in response to a need associated with receiving streams of audio wave data, or that a logical bus is deallocated when no longer needed, as recited in claim 13. Accordingly, claim 13 along with dependent claims 14-21 are allowable over Tulkoff for at least these reasons and the §102 rejection should be withdrawn.

Claim 36 recites "a plurality of logical bus objects configured to receive audio wave data, wherein each logical bus object corresponds to an audio wave data consumer, wherein each logical bus object is dynamically allocated in response to a need associated with receiving the audio wave data, and wherein at

least one of the logical bus objects can be dynamically deallocated when no longer needed to route a stream of audio wave data".

As described above in the response to the rejection of claim 1, Tulkoff does not show or disclose that a logical bus object is dynamically allocated in response to a need associated with receiving audio wave data, or that a logical bus object is dynamically deallocated when no longer needed to route a stream of audio wave data, as recited in claim 36. Accordingly, claim 36 along with dependent claims 37 and 41-43 are allowable over Tulkoff for at least these reasons and the §102 rejection should be withdrawn.

Claim 44 recites that at least one stream of audio wave data is routed to a plurality of different logical buses". As described above in the response to the rejection of claim 1, Tulkoff's various audio processes (10) appear to have a "fan-in" relationship with the audio mixer (12) and ultimately with the audio device (14) (*see* Tulkoff Fig. 1, for example). As such, Tulkoff does not show that a stream of audio wave data can be routed to plurality of different logical buses (e.g., in a "fan-out" relationship), as recited in claim 44.

Accordingly, claim 44 is allowable over Tulkoff for at least these reasons and the §102 rejection should be withdrawn.

Claim 45 recites "dynamically providing at least one logical bus component in response to a need associated with receiving the streams of audio wave data, the logical buses configured to route the one or more streams of audio wave data to the audio wave data consumer component", and "dynamically deallocating at least

one of the logical buses when no longer needed to route a stream of audio wave data".

As described above in the response to the rejection of claim 1, Tulkoff does not show or disclose dynamically providing a logical bus component in response to a need associated with receiving streams of audio wave data, or dynamically deallocating a logical bus when no longer needed to route a stream of audio wave data, as recited in claim 45. Accordingly, claim 45 along with dependent claims 47-48 and 50-51 are allowable over Tulkoff for at least these reasons and the § 102 rejection should be withdrawn.

Claim 52 recites "dynamically defining logical buses in response to a need associated with receiving the streams of audio wave data, the logical buses each corresponding to an audio wave data consumer", "assigning at least one of the multiple streams of audio wave data to a plurality of the logical buses", and "dynamically deallocating at least one of the logical buses when no longer needed".

As described above in the response to the rejection of claim 1, Tulkoff does not show or disclose any of these features recited in claim 52. Accordingly, claim 52 along with dependent claims 53-56 are allowable over Tulkoff for at least these reasons and the § 102 rejection should be withdrawn.

35 U.S.C. §103 Claim Rejections

Claims 2, 22-30, 32-35, 38, 40, 46, and 49 are rejected under 35 U.S.C. §103(a) as being obvious over Tulkoff in view of U.S. Patent No. 5,717,154, to Gulick (*Office Action* p.14). Applicant respectfully traverses the rejection.

Claims 31 and 39 are rejected under 35 U.S.C. §103(a) as being obvious over Tulkoff in view of Gulick, and further in view of U.S. Patent No. 6,100,461 to Hewitt (*Office Action* p.21). Applicant respectfully traverses the rejection.

Claim 2 is allowable by virtue of its dependency upon claim 1 which is allowable over Tulkoff for at least the reasons described above in response to the §102 rejection of claim 1. Claim 2 is also allowable over the Tulkoff-Gulick combination because Gulick does not address the deficiencies of Tulkoff as described above in the response to the rejection of claim 1. Accordingly, the §103 rejection should be withdrawn.

Claims 22-24 are allowable by virtue of their dependency upon claim 13 which is allowable over Tulkoff for at least the reasons described above in response to the §102 rejection of claim 13. Claims 22-24 are also allowable over the Tulkoff-Gulick combination because Gulick does not address the deficiencies of Tulkoff as described above in the response to the rejection of claim 13.

Additionally, claim 23 recites that "the sources include a plurality of synthesizers that generate the one or more streams of audio wave data, wherein at least one of the synthesizers generates a plurality of outputs, and wherein respective ones of the outputs are provided to different respective logical buses".

Tulkoff and/or Gulick do not teach or suggest a synthesizer that generates a plurality of outputs that are provided to different respective logical buses, as recited in claim 23. As described above in the response to the §102 rejection of claim 1, Tulkoff does not fairly teach a "fan-out" type of audio-data-routing relationship between elements, and Gulick is not cited for this feature.

Accordingly, claim 23 is also allowable over the Tulkoff-Gulick combination for at least these reasons and Applicant respectfully requests that the §103 rejection be withdrawn.

Claim 25 recites an audio generation system comprising "a software component that defines a plurality of logical buses, an individual logical bus configured to correspond to an audio wave data consumer, receive one or more of the streams of audio wave data, and route the one or more streams of audio wave data to the audio wave data consumer", and "wherein the synthesizer is configured to route at least one of the streams of audio wave data to different ones of the logical buses."

Tulkoff and/or Gulick do not teach or suggest a synthesizer configured to route a stream of audio wave data to different ones of the logical buses, as recited in claim 25. As described above in the response to the §102 rejection of claim 1, Tulkoff does not fairly teach a "fan-out" type of audio-data-routing relationship between elements, and Gulick is not cited for this feature.

Accordingly, claim 25 is allowable over the Tulkoff-Gulick combination for at least these reasons and the §103 rejection should be withdrawn.

Claims 26-31 and 32-35 are allowable by virtue of their dependency upon claim 25. Additionally, some or all of claims 26-30 and 32-35 are allowable over the Tulkoff-Gulick combination or Tulkoff-Gulick-Hewitt combination for independent reasons. For example:

Claim 27 recites that "the software component is configured to define the logical buses dynamically in response to a need associated with receiving the streams of audio wave data, and is further configured to dynamically deallocate at least one of the logical buses when no longer needed".

As described above in the §102 response to the rejection of claim 1, Tulkoff does not show a software component to define logical buses dynamically in response to a need associated with receiving streams of audio wave data, or that the software component can dynamically deallocate at least one of the logical buses when no longer needed, as recited in claim 27. Further, Gulick is not cited for this feature. Accordingly, claim 27 is allowable over the Tulkoff-Gulick combination for at least these reasons and the §103 rejection should be withdrawn.

Claim 28 recites that "the synthesizer has a channel that generates a stream of audio wave data and that is configurable to route the stream of audio wave data to a plurality of the logical buses". Tulkoff and/or Gulick do not teach or suggest that a synthesizer has a channel that is configurable to route a stream of audio wave data to a plurality of the logical buses, as recited in claim 28. As described above in the response to the §102 rejection of claim 1, Tulkoff does not fairly teach a "fan-out" type of audio-data-routing relationship between elements, and Gulick is not cited for this feature. Accordingly, claim 28 is allowable over the

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Tulkoff-Gulick combination for at least these reasons and the §103 rejection should be withdrawn.

Claims 38 and 40 are allowable by virtue of their dependency upon claim 36 which is allowable over Tulkoff for at least the reasons described above in response to the §102 rejection of claim 36. Claims 38 and 40 are also allowable over the Tulkoff-Gulick combination because Gulick does not address the deficiencies of Tulkoff as described above in the response to the rejection of claim 36.

Additionally, claim 38 recites that "at least one of the streams of audio wave data is provided to different respective logical buses". As described above in the response to the rejection of claims 25 and 28, Tulkoff and/or Gulick do not teach or suggest that a stream of audio wave data is provided to different respective logical buses, as recited in claim 38. Accordingly, claim 38 is also allowable over the Tulkoff-Gulick combination for at least these reasons and the §103 rejection should be withdrawn.

Claim 39 is allowable by virtue of its dependency upon claim 36 which is allowable over Tulkoff for at least the reasons described above in response to the §102 rejection of claim 36. Claim 39 is also allowable over the Tulkoff-Gulick-Hewitt combination because neither Gulick nor Hewitt addresses the deficiencies of Tulkoff as described above in the response to the rejection of claim 36.

<u>Claims 46 and 49</u> are allowable by virtue of their dependency upon claim 45 which is allowable over Tulkoff for at least the reasons described above in response to the §102 rejection of claim 45. Claims 46 and 49 are also allowable over the Tulkoff-Gulick combination because Gulick does not address the deficiencies of Tulkoff as described above in the response to the rejection of claim 45.

Conclusion

Pending claims 1-56 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. If any issues remain that preclude issuance of this application, the Examiner is urged to contact the undersigned attorney before issuing a subsequent Action.

Respectfully Submitted,

Dated: March 24, 2005   By: _____
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